

been cancelled, and these have been combined to make newly submitted independent claim 27.

Claim 13 has been cancelled and rewritten as independent claim 23.

Claim 13 had been intended to depend upon claim 1, and it has numerical limitations closely related to, or comparable to, one or more of the claims as being allowable, so it is believed that claim 23 should be found allowable also.

Also in the last Office Action, claim 1 and certain claims which depended thereon were rejected on the basis of two patents. These claims were rejected more specifically on the basis of Hickey (U.S. 5,224,889) in view of Kroeber (U.S. 5,207,605).

Claim 1 has been amended more to add clarification to the functions accomplished by the invention as recited in claim 1. It is believed that by reading the amendments made to this claim, it will abundantly clear that neither Hickey or Kroeber, taken alone or individually would render the present invention obvious.

It is to be recalled that as stated on page 1, beginning on line 21 of the present invention, an object was to provide a deflector propellor guard and method to provide a balance of desirable features, and more particularly which serves a deflecting function to cause objects or underwater surface material (e.g. dirt, sand, etc.) to be deflected away from the propeller in a manner to alleviate at least to some extent the impact with such objects.

This is described more particularly on page 11 of the text of the present invention, lines 14-26. For the convenience of the Examiner, these are presented below.

"First, the deflector plates 48 serve not only a guarding function, but also a deflecting function. The lower surfaces 94 of the deflector plates 48 slant rearwardly and outwardly from one another to enhance their deflecting action. To describe this more specifically, reference is made to Figure 2, where there is at approximately the mid height of the deflector plates 48 drawn a horizontal section line 96. This same section line 96 is shown in the top plan view of Figure 3 as the two slanting lines 98 which form an

angle "e". This angular relationship exists all along the deflector plates 48. This angle "e" is shown as being about a right angle or a little bit less than the 90 degrees. This angle could possibly be as great as 135 degrees and as small as about 45 degrees, and desirably be between about 110 degrees and about 65 degrees."

Then the description is continued on through page 12, and attention is also called to the portion of the text on page 12, lines 12-25. These are repeated below.

"In the present invention, with the slope of these deflecting plates 48, two things are accomplished. First, the slant of the plates are such so that these do create a downward force component which has something of a lifting effect on the guard device 40. At the same time, there is a force component directed laterally outward which tends to deflect the sand or mud to the side. This same effect would also be accomplished when a gravel-like bottom is encountered.

It has been found that this arrangement enhances the ability of the boat to move forward in sandy, muddy or particulate material with less resistance. Also, there is a less disruptive effect on the river or lake bottom. More specifically, it sometimes happens that when the shallow bottom is encountered, something of a shallow furrow is formed, and the material is simply pushed to the side by the sloping surfaces 100."

With that in mind, we now look first at the Hickey patent. It can be seen that the front part 28 of the guard plate slants upwardly and forwardly and is made planar. Then as can be seen in Fig. 2, the rear portion of the guard plate has side edges which slant outwardly. Designs such as this had previously been considered by the Applicant but discarded. More particularly, this is discussed by the Applicant on page 12, line 7 and following, as follows:

"If this sandy or muddy bottom is struck or engaged by a blunt surface, or a flat surface which is simply slanting downwardly and rearwardly, then there will be something of a 'bull dozing' effect where the material piles up in front of the guard plate. This simply compounds the problem."

Then to consider this further, as the material would be piling up over the front plate 28, a portion of it would eventually be pushed to the side and then it would simply pass over on top of the rear part of the guard plate.

This problem is alleviated in the present invention by the front deflector plates, followed by the guard plates which slant upwardly and laterally outwardly. As indicated in the text of the application, this has several beneficial effects in that it can move through a sandy, muddy, or gravel bottom requiring less forward propulsive force by the boat, and also having less of a tendency to lift the boat upwardly in the water, thus compounding the problem of engagement with a shallow bottom.

Method claim 20 which has been found allowable in effect indicates the main components of this method, utilizing the apparatus as recited in claim 1.

Now let us turn our attention to the Kroeber patent and analyze briefly how it would function when encountering a shallow muddy or sandy bottom. It can be seen that the two upwardly slanting side section 16a and 16b, in combination with the front plate, would simply act more like a scoop when it encounters a sandy or muddy bottom causing the material to flow over the front plate and in-between the area occupied by the side portions 16a and 16b and thus impede the rotation of the propeller.

As is well known to the Examiner, in order to combine two references to make a rejection, there has to be a teaching in one or the other of these patents that it would be logical to draw certain components from the other patent to make this combination. The Applicant's attorney, the undersigned herein, can find no such suggestion on either of these patents (i.e. Kroeber or Hickey). Even if the side plates 16a and 16b of Kroeber were added to the rear guard plate portion of Hickey, this would still not meet the limitations of claim 1 of the present

application. Further, it would not accomplish the same function. Further, if the upwardly slanting portion of Hickey were added to Kroeber, this would still not meet the limitations of claim 1.

In closing, it should be recognized that these design features of the present invention are not arbitrary without providing any specific function. Rather, these components cooperate rather uniquely to enable the present invention to properly accomplish its intended functions.


Also enclosed with this response is a Prior Art Statement, citing a number of U.S. Patents with copies of these patents being closed. It is readily apparent that while various features are shown, they are no more relevant to the basic teachings of the present invention than the prior art cited in the last Office Action. These had been disclosed in an earlier search done by an attorney other than the undersigned who had prepared and filed the above application, and had been overlooked in filing the follow-on regular application.

If there is any matter which could be expedited by consultation with the Applicant's attorney, such would be welcome. The Applicant's undersigned attorney can normally be reached at the telephone number set forth below.

Signed at Bellingham, County of Whatcom, State of Washington this 24th day of July, 2000.

Respectfully submitted,

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By _____

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